



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,122	04/21/2004	Kelly B. Cameron	52196/RRT/B600	5195
23363	7590	02/23/2005	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			TSE, YOUNG TOI	
PO BOX 7068				
PASADENA, CA 91109-7068			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/829,122	CAMERON, KELLY B.
	Examiner YOUNG T. TSE	Art Unit 2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 21 April 2004.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 1,8 and 15 is/are allowed.  
 6) Claim(s) \_\_\_\_\_ is/are rejected.  
 7) Claim(s) 2-7,9-14 and 16-20 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 21 April 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 042104.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

***Continued Prosecution Application***

***Specification***

1. The disclosure is objected to because of the following informalities: on page 1, line 4, Applicant is requested to update the Serial No. 09/498,779, now U.S. Patent No. 6,741,664 B1; on page 3, line 16, "6.5" should be "6"; on page 4, line 26, "With" should be "with"; on page 5, line 14, "(FIG. 1" should be "(FIG. 1)"; on page 13, line 28, "the/outputs" should be "then outputs"; and on page 15, line 26, the phrase "Thus,20" is not understood. Appropriate correction is required.

***Claim Objections***

2. Claims 4-5, 12, and 16-20 are objected to because of the following informalities:

In claim 4, line 1, "the computing a node metric comprises" should be "computing the node metric for each of the plurality of states comprises".

In claim 5, line 1, "claim 2" should be "claim 4" to avoid the lacking of antecedent basis of "the selected incoming branches".

In claim 12, line 1, "claim 9" should be "claim 11" to avoid the lacking of antecedent basis of "the selected incoming branches".

In claim 16, line 1, "computing" should be "means for computing".

In claim 18, line 1, "the computing a node metric comprises" should be "means for computing the node metric for each of the plurality of states comprises means for".

In claim 19, line 1, "claim 16" should be "claim 18" to avoid the lacking of antecedent basis of "the selected incoming branches"; line 1, "storing" should be "means for storing"; and line 2, "states, in a memory" should be "states".

Wherein the dependent claims 17 and 20 are depended upon claim 16.

Appropriate correction is required.

3. Claims 2-3, 6-7, 9, 10-11, 13-14, and 16-20 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The further claimed subject matter of claims 2, 9 and 16 lacks cooperation or connection with the independent claims 1, 8, and 15, respectively; wherein claims 3, 6-7, 10-11, 13-14, and 17-20 are depended upon claims 2, 9, and 16, respectively.

#### ***Allowable Subject Matter***

4. Claims 1, 8 and 15 are allowed.
5. Claims 2-7, 9-14 and 16-20 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.
6. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to show or suggest that a system or method for decoding a received signal encoded with a trellis code corresponding to a trellis diagram having a plurality of states comprising a node metric module, a path memory module, and a node

select module for selecting a state having the smallest node metric, as a current optimal state, wherein the path memory module selects a conditional optimal symbol sequence from a computed set of conditional optimal symbol sequences that ends at a selected current optimal state, as an optimal symbol sequence and outputs the optimal symbol sequence as a decoded signal.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hatakeyama, Kim et al. and Chang are related to trellis decoders for performing trellis coded modulation of plural states in a trellis diagram.

8. This application is in condition for allowance except for the following formal matters:

The objections to claims 2-7, 9-14 and 16-20 and the objection to the specification set forth in this Office action.

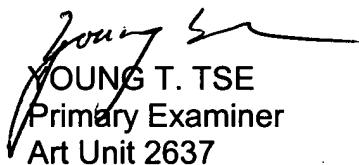
Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday and Wednesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
YOUNG T. TSE  
Primary Examiner  
Art Unit 2637